

Models of the Universe from Hipparchos to Hawking

Spring 2006

Graham School

Master of Liberal Arts

Rocky Kolb

Lectures: Tuesdays 6:30pm – 9:30 pm, Gleacher Center

The Solar System

- Readings: Kolb, *Blind Watchers of the Sky*
- March 28: Introduction to *Models*, introduction to cosmology, introduction to the universe, and a look at the sky. Greek astronomy through Ptolemy. Retrograde motion, epicycles, the Greek universe. Copernicus.
- April 04: Copernicus: The heliocentric universe. Brahe: Measuring the sky. Kepler. The laws of planetary motion.
- April 11: Galileo: The triumph of the scientific method.
- April 18: Newton: The clockwork universe.
- April 25: Reaching to the stars. The distance scale.

Galaxies and the Universe

- Readings: Hogan, *The Little Book of the Big Bang*
- May 02: The Realm of the Nebulae.
- May 09: The shape of the Universe. The big bang
- May 16: The primordial soup. Dark matter and dark energy.

The Megaverse

- Readings: Hawking, *A Brief History of Time*.
- May 23: The universe from nothing. Extra dimensions.
- May 30: The meaning of time.